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POWER GENERATION

PROJECT COLLECTION

ADVANCED FRP SYSTEMS

ADVANCED FRP SYSTEMS

COMPOSITE PIPE REPAIR

COAL PIPE ELBOW REPAIR

01

HIGH-TEMPERATURE COMPOSITE REINFORCEMENT

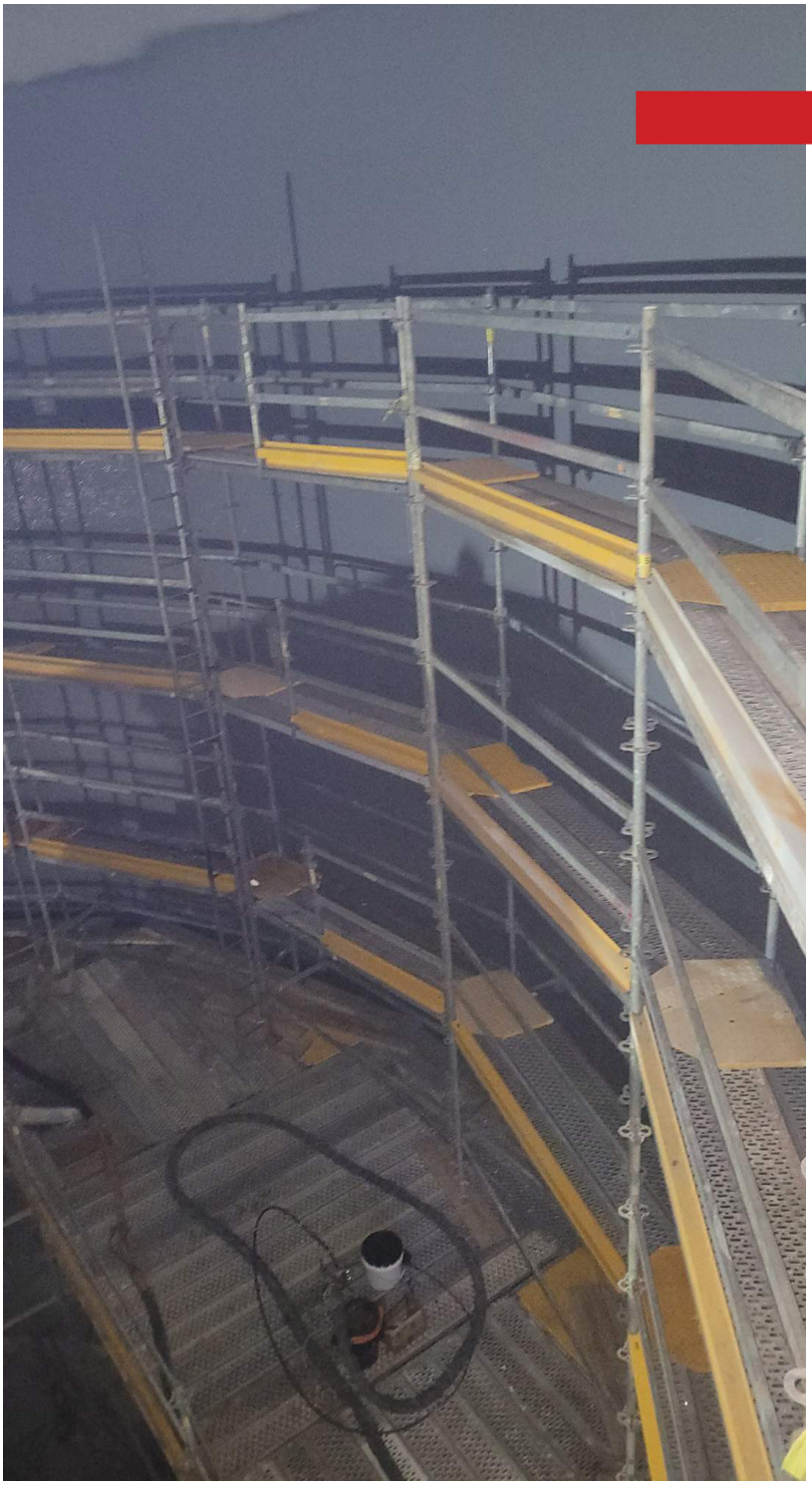
Numerous coal pipe elbows at a coal-fired plant were badly worn down, with some UT readings below .060". Ten elbows were repaired using a ceramic reinforced putty followed by a high-temperature carbon fiber composite shell.

CF-500 BD - FRP 210 HT - Ceramic Repair Putty - HP-300 HT

POWER GENERATION

COATINGS

CRITICAL PATH SPRAY DRY ABSORBER RECOATING



02

PROTECTIVE COATING RESTORATION HALTS METAL LOSS

The inspectors at a 1,076 MW Power Generation facility found significant metal loss on a Spray Dry Absorber caused by corrosion/erosion during operation. Advanced FRP recommended HP 400 AR, a ceramic-reinforced coating system solution, as it would stop additional metal loss and protect the existing structure. Due to the size and duration of the project, the repair was considered a critical path repair for their fall outage. Applicators were able to complete work ahead of schedule and the repair was no longer considered critical path.

HP 400 AR

COAL PULVERIZER DOOR COATING APPLICATION

03

ABRASION-RESISTANT COATING ENABLES SWIFT RETURN TO SERVICE

A coal-fired power plant was experiencing degradation of the coal pulverizer doors. They needed an easy-to-install coating system that would prevent further degredation of the metal. The system had to be cost-effective and provide outstanding abrasion resistance, even at elevated service temperatures. Our Ceramic Repair Putty HT provided them exactly the solution they needed to return these mills to service without concern.

Ceramic Repair Putty HT

ADVANCED FRP SYSTEMS

COMPOSITE PIPE REPAIR

PINHOLE LEAK IN CIRCULATING WATER PIPE

04

HIGH-STRENGTH CARBON FIBER REPAIR STOPS LEAK

A nuclear power plant had a 42-inch diameter circulating water pipe that had developed a pinhole leak. The pipe was repaired by installing a high-strength carbon composite followed by a 100% solids epoxy topcoat.

CF-500 BD - FRP 210 HT - HP-300 Epoxy - FRP 120 HT

ADVANCED FRP SYSTEMS

COMPOSITE TANK REPAIR

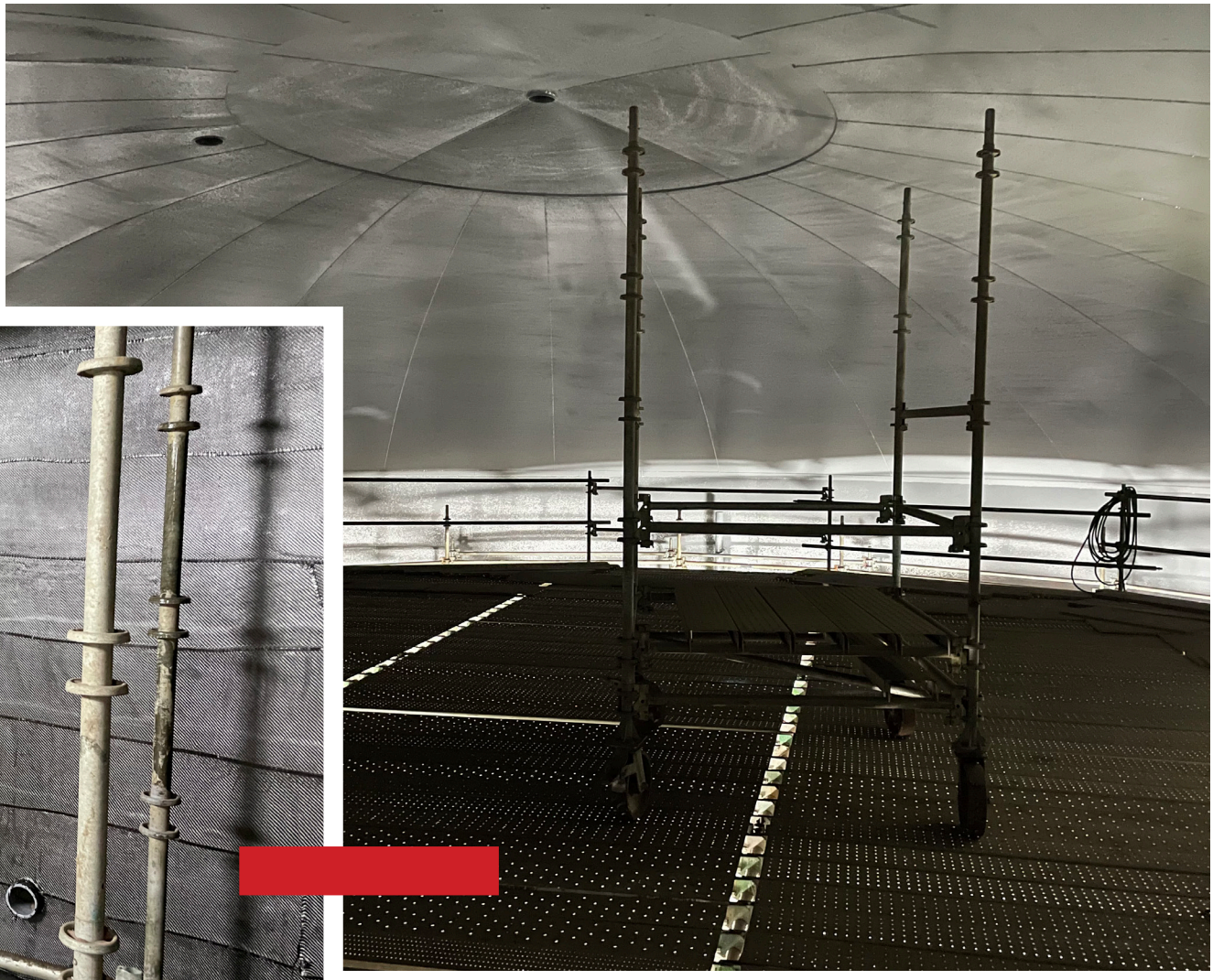
INTERNAL CORROSION IN RAW WATER STORAGE TANK

05

LONG-TERM CARBON FIBER REINFORCEMENT RESTORES TANK OPERATIONS

Inspectors at a power generation facility discovered extensive internal corrosion in their raw water storage tank. Because there was no previous coating, Microbially Induced Corrosion quickly degraded the tank with areas at less than 50% remaining wall thickness. The plant chose Advanced FRP's immersion grade, carbon fiber reinforcement system with a glass flake reinforced epoxy topcoat. This provided a long term solution that would structurally reinforce the existing tank and prevent further corrosion.

FRP Repair Putty - FRP 211 HT Saturant - CF-500 BD - HP 300 GF



ADVANCED FRP SYSTEMS

COMPOSITE PIPE REPAIR

4-LAYER, HIGH-STRENGTH COMPOSITE REINFORCEMENT

06

AGGRESSIVE WEAR IN SOLID FUEL HANDLING SYSTEM

A coal-fired power plant was experiencing significant wear in their solid fuel handling systems. Especially problematic were the areas where the piping led into the pulverizer and elbows located between the burner and the pulverizer. Advanced FRP trained the plant's internal team and maintenance contractor on the application of a ceramic-lined, carbon fiber wrap on the troublesome areas. After proper surface preparation, our abrasion resistant Ceramic Repair Putty HT was applied at 125 mils to the pipe surface followed by 4-layers of a high-strength, high temperature carbon fiber composite.

Ceramic Repair Putty HT - FRP 211 HT Saturant - CF-500 BD - HP 300 Epoxy

ADVANCED FRP SYSTEMS

COMPOSITE PIPE REPAIR

COAL PIPE ELBOW THROUGH-WALL FAILURES

07

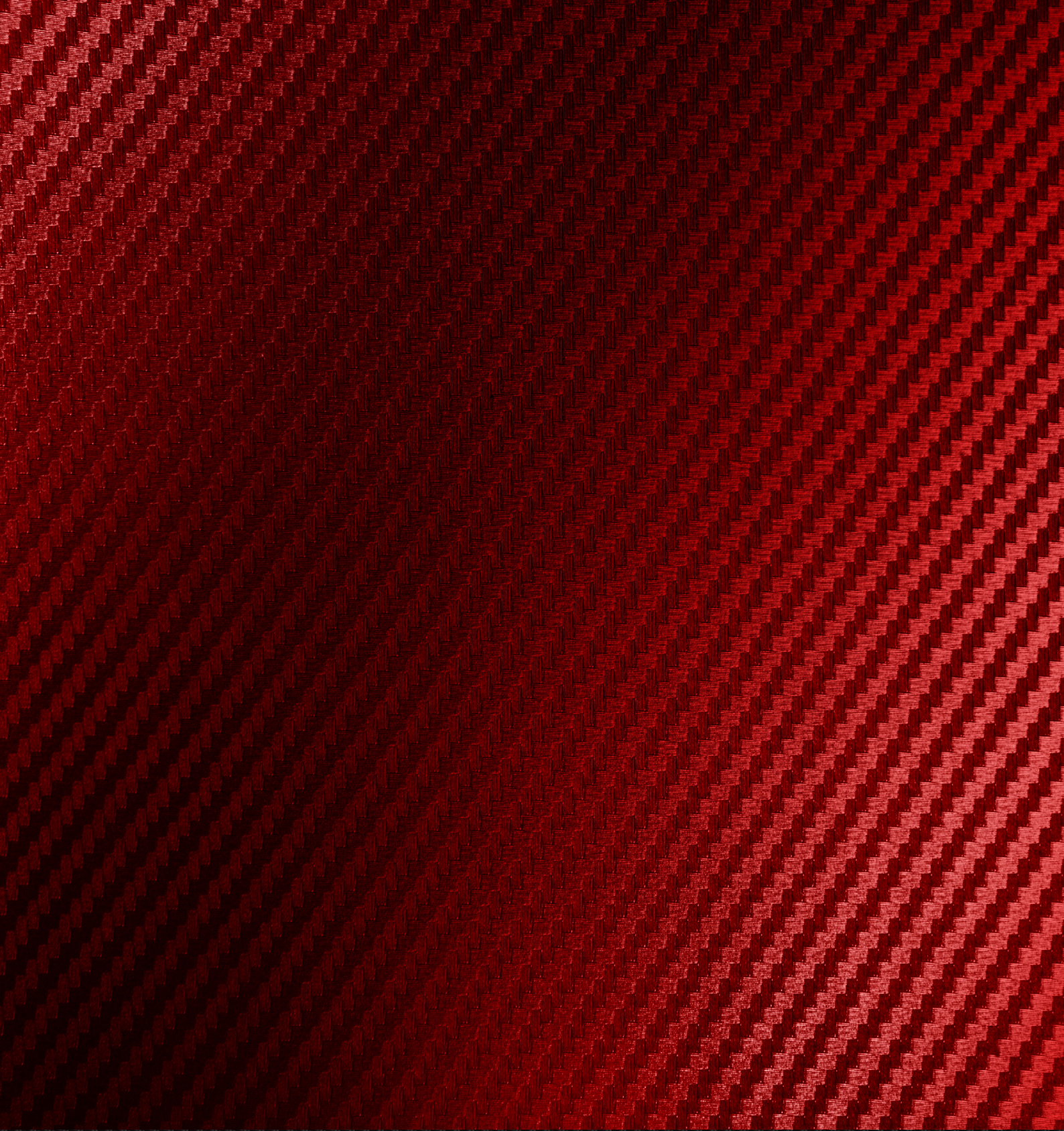
CARBON FIBER REINFORCEMENT EXTENDS PIPE SERVICE LIFE

A coal-fired power plant had through-wall failures in its coal pipe elbows running into their main boiler. The pipes were repaired by installing an abrasion-resistant ceramic repair putty reinforced with a carbon fiber composite.

CF-500 BD - FRP Saturant 210 HT

- Ceramic Repair Putty - HP-300 HT


2784



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